

Work Order ID 51114-2

August 4, 2009 11:04:35 AM

Page 1

Item ID: D3041-3

Revision ID: C

Item Name: Clamp

Start Date: 8/07/09

Start Qty: 20.00

Required Date: 8/21/09

Req'd Qty: 20.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3041

Rev C

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut D2423 Extrusion: 1.250" Long

32 09/08/04

37

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Check for cracks while loading into the machine Machine as per Folio FA153 and Dwg D3041 Tumble and Deburr rough edges after tumbling Identify as D3041-3

DA 09/08/05

30

7

(P70)

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

DA 09/08/05

30

8

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D 3041-3 PAR #: _____ Fault Category: Machined Parts NCR: (Yes) No DQA: ✓ Date: 05.05.10
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: ✓ Date: 05.05.10

| NCR: 51114 | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------------|------|---|--------------------------------|--|-----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 0508-06 | 110 | Qty 4 parts the bit pushed down on the lug causing the hole to be cracked. (A) 3 other parts were machined incorrectly. 2 incorrect origins & 1 incorrect correction (went negative off set instead on a positive off set) (B) R.C: A - process - To much tool feed. B - operator error. | | Scrap & destroy Qty 7: Replace. B <u>45800</u> Feed reduced. | DTT 09/08/06 | amr 09/08/07 | | 0508-06 |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 51114



Page 2

August 4, 2009 11:04:35 AM

Item ID: D3041-3

Accept



Setup Start



Revision ID: C

Stop



Item Name: Clamp

Start Date: 8/07/09

Start Qty: 20.00



Cust Item ID:

Required Date: 8/21/09

Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

OK 09/08/07

30

0

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

=> JH 09-08-10

X 30

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

M112260

Mask inside of 0.8120" diameter hole START TIME:
1:45pm OVEN TEMPERATURE: 2:15pm FINISH
TIME: 320°F

=> JH

09-08-10

X 30

Powder Coating

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Work Order ID 51114

August 4, 2009 11:04:35 AM

Page 3

Item ID: D3041-3

Accept

Revision ID: C

Item Name: Clamp

Start Date: 8/07/09 Start Qty: 20.00

Required Date: 8/21/09 Req'd Qty: 20.00

Reference:

Cust Item ID:




Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|----------------------|----------------|--------------|--------------|------------------|---------------|------------------|----------------|
| 160  QC Quality Control | QC3- Inspect Part Finish Memo | 0.00 0.00 | 2) 8 02/08/10 | | | counted (+25) | 4 | | |
| 170  Small Fab Small Fab | Small Fab Memo 1- Press D261 I bearing into lug as per Dwg D3041 2- Stake bearing into place as per Dwg D3041 3-Touch up stake marks with white emeron paint **PLEASE SEE JASON BEFORE PRESSING BEARINGS FOR NEW TOOLING** | 0.00 0.00 | | | | 09/08/31 (26) | | | |
| 180  QC Quality Control | QC5- Inspect part completeness to step on W/O Memo | 0.00 0.00 | 2) 8 02/08/31 | | | (+26) | 4 | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 51114

August 4, 2009 11:04:35 AM



Page 4

Item ID: D3041-3

Accept



Setup Start



Revision ID: C

Stop



Item Name: Clamp

Start Date: 8/07/09 Start Qty: 20.00



Cust Item ID:

Required Date: 8/21/09 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
| 190 | Identify as per dwg & Stock Location: <u>463</u> | 0.00 | | | | | | | |
| | Packaging | | | | | | | | |
| | Memo | 0.00 | | | | | | | |
| | Packaging | | | | | | | | |
| 200 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| | QC | | | | | | | | |
| | Memo | 0.00 | | | | | | | |
| | Quality Control | | | | | | | | |

09/5/8 (26)

09/09/08
mf 09-09-08

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

Page 1

August 4, 2009 11:04:35 AM

Work Order ID: 51114

Parent Item: D3041-3RevC

Parent Item Name: Clamp


Comments:

Start Date: 8/07/09

Required Date: 8/21/09

Start Qty: 20.00

Required Qty: 20.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| D2611RevC | | Manufactured | No | | | 100 | Each | 37.0000 | 20.0000 | | | |
|  | | | | | | | | | | | | |
| Bearing | | | | | | | | | | | | |

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

46841

50521

37

8

29

f

170

760.9447

2.1937

B 51197
B 51262

22

4

6

88 09/08/09

D2423RevB1

Manufactured

No



Lug Extrusion

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

43722

44529

45800

760.94468

213.01468

22.39

525.54

DIT 09/08/09

3,854 (F) ✓

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

| | | |
|------------------------------|---------------|----------------------------|
| DART AEROSPACE LTD | | Work Order: 51114 |
| Description: clamp | | Part Number: D30413 |
| Inspection Dwg: D3041 | Rev: C | Page 1 of 1 |

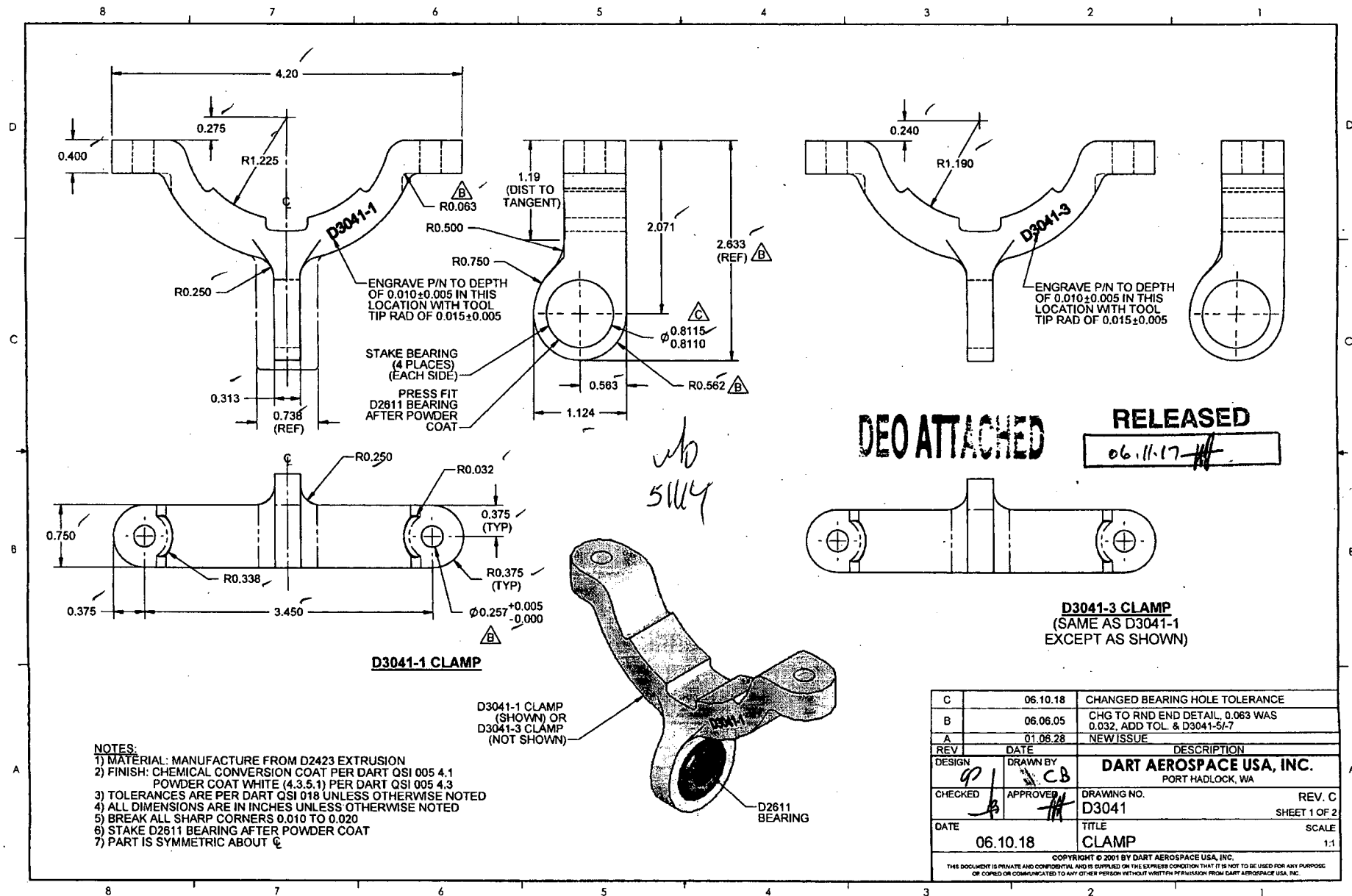
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

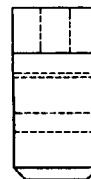
| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|-----------------------|------------------|--------|--------|----------------------|----------|
| 4.20 | $\pm .030$ | 4.205 | ✓ | | | |
| .400 | $\pm .010$ | .395 | ✓ | | | |
| 1.190 | $\pm .010$ | 1.190 | ✓ | | | |
| 1.250 | $\pm .010$ | .250 | ✓ | | | |
| .313 | $\pm .010$ | .313 | ✓ | | | |
| 1.063 | $\pm .010$ | .063 | ✓ | | | |
| .750 | $\pm .010$ | .756 | ✓ | | | |
| .375 | $\pm .010$ | .375 | ✓ | | | |
| 3.450 | $\pm .010$ | 3.450 | ✓ | | | |
| Ø.257 | $\pm .005$ $-.001$ | .258 | ✓ | | | |
| 1.375 | $\pm .010$ | .375 | ✓ | | | |
| .375 | $\pm .010$ | .376 | ✓ | | | |
| 1.124 | $\pm .010$ | 1.124 | ✓ | | | |
| .563 | $\pm .010$ | .563 | ✓ | | | |
| Ø.811 | $\pm .005$ $-.000$ | .811 | ✓ | | | |
| 2.633 | $\pm .010$ | 2.633 | ✓ | | | |
| 2.071 | $\pm .010$ | 2.072 | ✓ | | | |
| | | | | | | |
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|------------------------|------------------------|----------------------------|-----|
| Measured by: JL | Audited by: amf | Prototype Approval: | N/A |
| Date: 09/08/07 | Date: 09/08/07 | Date: | N/A |

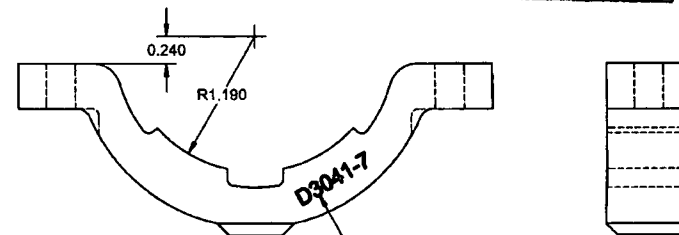
| Rev | Date | Change | Revised by | Approved |
|-----|------|-----------|------------|----------|
| A | | New Issue | KJ/JLM | |



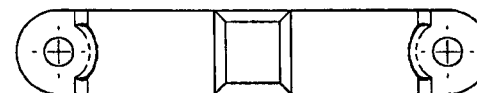
06.4.17 H




—ENGRAVE P/N TO DEPTH
OF 0.010 ± 0.005 IN THIS
LOCATION WITH TOOL
TIP RAD OF 0.015 ± 0.005



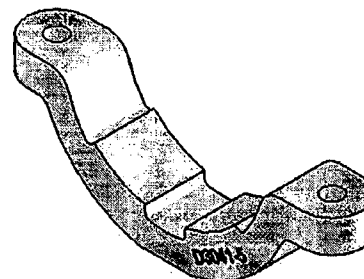
ENGRAVE P/N TO DEPTH
OF 0.010 ± 0.005 IN THIS
LOCATION WITH TOOL
TIP RAD OF 0.015 ± 0.005



D3041-7 CLAMP 
(SAME AS D3041-5
EXCEPT AS SHOWN)

D3041-5 CLAMP 

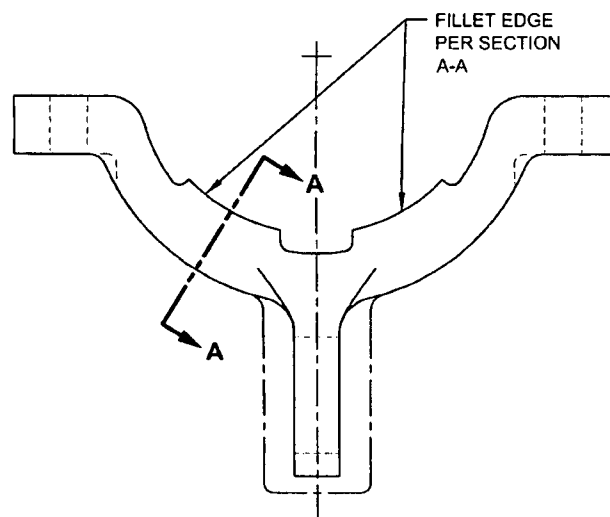
1) MATERIAL: MANUFACTURE FROM D2423 EXTRUSION
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
5) BREAK ALL SHARP CORNERS 0.010 TO 0.020
6) PART IS SYMMETRIC ABOUT C



| | | | |
|--|--------------------------------|---------------------------------|--------|
| DESIGN <i>Q1</i> | DRAWN BY <i>CB</i> | DART AEROSPACE USA, INC. | |
| CHECKED <i>JB</i> | APPROVED <i>[Signature]</i> | PORT HADLOCK, WA | REV. C |
| DRAWING NO. D3041 | | SHEET 2 OF 2 | |
| DATE 06.10.18 | TITLE CLAMP | SCALE | 1:1 |
| COPYRIGHT © 2015 BY DART AEROSPACE USA, INC. | | | |
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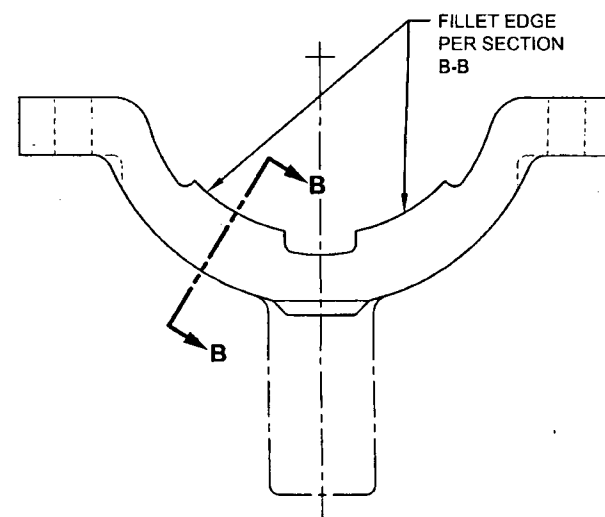
| | | | | | | |
|----------------------|------------------|------------------|---|-------------------------|---------------------------|--------------|
| DRAWING NO. D3041 | TITLE CLAMP | REV. C | DART AEROSPACE LTD ENGINEERING ORDER | D.E.O. NO. D3041-C-1 | SHEET NO. SHEET 1 OF 1 | SCALE NTS |
| DRAWN ADS | CHECKED | MFG. APPR. | APPROVED | DE APPR. | | |
| DATE 09.03.04 | DATE 09.03.12 | DATE 09.03.12 | DATE 09.03.13 | DATE 09.03.13 | | |

ADD FILLETS TO -1/-3/-5/-7 PER SECTIONS A-A AND B-B TO PREVENT CHAFING OF RUBBER CUSHIONS AS SHOWN:



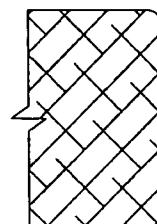
D3041-1 CLAMP

D3041-3 CLAMP



D3041-5 CLAMP

D3041-7 CLAMP



R0.060 MIN - R0.10 MAX
2PL

SECTION A-A
SCALE 2X

SECTION B-B
SCALE 2X

SEE PAR 122 FOR FURTHER DETAILS

51114
RELEASED
09/07/07

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